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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,957	03/16/2001	Hisao Hayashi	SON-2050	5303

7590 07/28/2004
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Washington, DC 20036

EXAMINER


LEWIS, MONICA

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/808,957	Applicant(s) HAYASHI, HISAO	
	Examiner Monica Lewis	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-28,31-37,40-46 and 49-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-28,31-37,40-46 and 49-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the supplemental response filed July 2, 2004.

Response to Arguments

2. Applicant's arguments with respect to claims 22-28, 31-37, 40-46 and 49-52 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22, 24-26, 32, 34, 35, 41, 43, 44 and 50-52 are rejected under 35 U.S.C. 103(a) as obvious over Vu et al. (U.S. Patent No. 5,376,561) in view of Toshiba (Japanese Patent No. 11265155).

In regards to claim 22, Vu discloses the following:

- a) a product substrate (36) and a thin film device (For Example: See Figure 4K);
- b) a manufacturing substrate (30) is of an inorganic material (For Example: See Figure 4K);
- c) product substrate (For Example: See Figure 4K);
- d) product substrate has a first side and a second side opposed to said first side (For Example: See Figure 4K);
- e) manufacturing substrate is adjacent said first side, said manufacturing substrate being closer to said first side than to said second side (For Example: See Figure 4K);
- f) thin film device is adjacent said second side, said thin film device being closer to said second side than to said first side (For Example: See Figure 4K);

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g) an adhesive layer (34) is formed between said first side and said manufacturing side (For Example: See Figure 4K);

h) product substrate is between said thin film device and said manufacturing substrate (For Example: See Figure 4K); and

i) manufacturing substrate is removable for exposing said first side by leaving said product substrate and said thin film device (For Example: See Figure 4K).

In regards to claim 22, Vu fails to disclose the following:

a) substrate is comprised of an organic material and a metal.

However, Toshiba discloses the use of an organic material and a metal coated on a substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of an organic material and a metal coated on a substrate as disclosed in Toshiba because it aids in stabilizing the display (For Example: See Abstract).

Additionally, since Vu and Toshiba are both from the same field of endeavor, the purpose disclosed by Toshiba would have been recognized in the pertinent art of Vu.

In regards to claim 24, Vu discloses the following:

a) thin film device is a thin film transistor (For Example: Figure 4K).

In regards to claims 25, 34 and 43, Vu fails to disclose the following:

a) metal is aluminum.

However, Toshiba discloses the use of aluminum coated on a substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of aluminum coated on a substrate as disclosed in Toshiba because it aids in stabilizing the display (For Example: See Abstract).

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Additionally, since Vu and Toshiba are both from the same field of endeavor, the purpose disclosed by Toshiba would have been recognized in the pertinent art of Vu.

In regards to claims 26, 35 and 44, Vu fails to disclose the following:

a) organic material is a plastic.

However, Toshiba discloses the use of a plastic substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of a plastic substrate as disclosed in Toshiba because it aids in stabilizing the display (For Example: See Abstract).

Additionally, since Vu and Toshiba are both from the same field of endeavor, the purpose disclosed by Toshiba would have been recognized in the pertinent art of Vu.

In regards to claim 32, Vu discloses the following:

- a) a product substrate and a pixel array (For Example: See Figure 4J);
- b) a manufacturing substrate is of an inorganic material (For Example: See Figure 4K);
- c) product substrate (For Example: See Figure 4K);
- d) product substrate has a first side and a second side opposed to said first side (For Example: See Figure 4K);
- e) manufacturing substrate is adjacent said first side, said manufacturing substrate being closer to said first side than to said second side (For Example: See Figure 4K);
- f) an adhesive layer is formed between said first side and said manufacturing substrate (For Example: See Figure 4K);
- g) pixel array is adjacent said second side, said thin film device being closer to said second side than to said first side (For Example: See Figure 4K);
- h) product substrate is between said pixel array and said manufacturing substrate (For Example: See Figure 4K); and

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i) manufacturing substrate is removable for exposing said first side by leaving said product substrate and said pixel array (For Example: See Figure 4L).

In regards to claim 32, Vu fails to disclose the following:

a) substrate is comprised of an organic material and a metal.

However, Toshiba discloses the use of an organic material and a metal coated on a substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of an organic material and a metal coated on a substrate as disclosed in Toshiba because it aids in stabilizing the display (For Example: See Abstract).

Additionally, since Vu and Toshiba are both from the same field of endeavor, the purpose disclosed by Toshiba would have been recognized in the pertinent art of Vu.

In regards to claim 41, Vu discloses the following:

a) a product substrate and an electroluminescence device (For Example: See Figure 4K);

b) a manufacturing substrate (For Example: See Figure 4K);

c) product substrate is one of an organic material (For Example: See Figure 4K);

d) product substrate has a first side and a second side opposed to said first side (For Example: See Figure 4K);

e) manufacturing substrate is adjacent said first side, said manufacturing substrate being closer to said first side than to said second side (For Example: See Figure 4K);

f) an adhesive layer is formed between said first side and said manufacturing substrate (For Example: See Figure 4K);

g) electroluminescence device is adjacent said second side, said thin film device being closer to said second side than to said first side (For Example: See Figure 4K);

h) product substrate is between said electroluminescence device and said manufacturing substrate (For Example: See Figure 4K); and

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i) manufacturing substrate is removable for exposing said first side by leaving said product substrate and said electroluminescence device (For Example: See Figure 4L).

In regards to claim 41, Vu fails to disclose the following:

a) substrate is comprised of an organic material and a metal.

However, Toshiba discloses the use of an organic material and a metal coated on a substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of an organic material and a metal coated on a substrate as disclosed in Toshiba because it aids in stabilizing the display (For Example: See Abstract).

Additionally, since Vu and Toshiba are both from the same field of endeavor, the purpose disclosed by Toshiba would have been recognized in the pertinent art of Vu.

In regards to claims 50-52, Vu fails to disclose the following:

a) adhesive layer is dissolvable to remove said manufacturing substrate.

However, the limitation of "adhesive layer is dissolvable to remove said manufacturing substrate." makes it a product by process claim. The MPEP § 2113, states, "Even though product -by[-] process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

A "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao and Sato et al.*, 190 USPQ 15 at 17 (CCPA 1976) (footnote 3). See also *In re Brown and Saffer*, 173 USPQ 685 (CCPA 1972); *In re Luck and Gainer*, 177 USPQ 523

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(CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); and *In re Marosi et al.*, 218 USPQ 289 (CAFC 1983) final product per se which must be determined in a "*product by, all of*" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "*product by process*" claims or not. Note that Applicant has the burden of proof in such cases, as the above caselaw makes clear.

5. Claims 23, 33 and 42 are rejected under 35 U.S.C. 103(a) as obvious over Vu et al. (U.S. Patent No. 5,376,561) in view of Toshiba (Japanese Patent No. 11265155) and Forbes (U.S. Patent No. 6,049,106).

In regards to claims 23, 33 and 42, Vu fails to disclose the following:

a) manufacturing substrate is glass.

However, Forbes discloses the use of a glass substrate (For Example: See Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of a glass substrate as disclosed in Forbes because it aids in reducing the cost of the device (For Example: See Abstract).

Additionally, since Vu and Forbes are both from the same field of endeavor, the purpose disclosed by Forbes would have been recognized in the pertinent art of Vu.

6. Claims 27, 36 and 45 are rejected under 35 U.S.C. 103(a) as obvious over Vu et al. (U.S. Patent No. 5,376,561) in view of Toshiba (Japanese Patent No. 11265155) and Yamazaki (U.S. Patent No. 6,057,234).

In regards to claims 27, 36 and 45, Vu fails to disclose the following:

a) a moisture-proof buffer film is formed between said second surface and said thin film device.

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However, Yamazaki discloses the use of a buffer film (For Example: See Figure 3A). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include the use of a buffer film as disclosed in Yamazaki because it aids in reducing defective contacts (For Example: See Column 3 Lines 1-5).

Additionally, since Vu and Yamazaki are both from the same field of endeavor, the purpose disclosed by Yamazaki would have been recognized in the pertinent art of Vu.

7. Claims 28, 37 and 46 are rejected under 35 U.S.C. 103(a) as obvious over Vu et al. (U.S. Patent No. 5,376,561) in view of Toshiba (Japanese Patent No. 11265155) and Hoffend, Jr. et al. (U.S. Publication No. 2002/0164535).

In regards to claims 28, 37 and 46, Vu fails to disclose the following:

a) plastic is from the group comprising polyether sulfone resin, polyethylene terephthalate resin and ARTON resin.

However, Hoffend, Jr. et al. ("Hoffend, Jr.") discloses polyethylene terephthalate resin (For Example: See Page 8 Paragraph 71). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include polyethylene terephthalate resin as disclosed in Hoffend, Jr. because it is substantially transmissive to visible light (For Example: See Page 8 Paragraph 71).

Additionally, since Vu and Hoffend, Jr. are both from the same field of endeavor, the purpose disclosed by Hoffend, Jr. would have been recognized in the pertinent art of Vu.

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8. Claims 31, 40 and 49 are rejected under 35 U.S.C. 103(a) as obvious over Vu et al. (U.S. Patent No. 5,376,561) in view of Toshiba (Japanese Patent No. 11265155) and Bae (U.S. Patent No. 6,458,613).

In regards to claims 31, 40 and 49, Vu fails to disclose the following:

a) adhesive layer is from the group comprising a polyimide, Teflon resin, silicon, germanium and metal.

However, Bae discloses an adhesive made of silicon (For Example: See Column 1 Lines 62-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Vu to include silicon as disclosed in Bae because it has a good adhesive property (For Example: See Column 1 Lines 62-65).

Additionally, since Vu and Bae are both from the same field of endeavor, the purpose disclosed by Bae would have been recognized in the pertinent art of Vu.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 571-272-1838.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML
July 26, 2004



Mary Wilczewski
Primary Examiner